

Serial No.: 09/945,482  
Group Art Unit: 2635

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A radio frequency identification (RFID) reader for preventing data collision in an RFID tag system, the RFID reader comprising:

a transferring unit, ~~wherein the transferring unit includes:~~ comprising:

a carrier signal generator for generating a carrier signal ~~determined by that~~ establishes an electromagnetic field strength, wherein the strength of the electromagnetic field defines ~~defining~~ a tag read range;

a carrier signal amplifier for amplifying the carrier signal from the carrier signal generator; and

a gap signal generator for ~~generating~~ establishing a non-transfer period of the RFID reader, wherein the non-transfer period of the RFID reader is dependent on an RFID tag and a tolerance level of an electric device associated with the RFID tag;

a receiving unit, ~~wherein the receiving unit includes:~~ comprising:

an amplitude detector for detecting an amplitude of a read tag data stream;

a filtering and amplifying unit for filtering and amplifying the detected amplitude from the amplitude detector; and

a signal collision detector for receiving an output of the filtering and amplifying unit ~~for detecting~~ to detect data collision;

a data decoder; and

an antenna coil.

Claims 2-3 (canceled).

Claim 4 (currently amended): A method for preventing data collision in a radio frequency identification (RFID) system, the method comprising: ~~the steps of:~~

Serial No.: 09/945,482  
Group Art Unit: 2635

a) transmitting a carrier signal of a predetermined frequency from an RFID reader[(:)], wherein the transmitted carrier signal establishes an electromagnetic field, and wherein the strength of the electromagnetic field defines a tag read range;

b) amplifying the transmitted carrier signal from the RFID reader;

[[b)]] c) determining whether an amplitude of the transmitted carrier signal is has been modulated;

[[c)]] d) ~~transmitting~~ generating a first gap signal[(:)] dependent on an RFID tag and a tolerance level of an electric device associated with the RFID tag to provide a time gap in the transmitted carrier signal;

[[d)]] e) determining whether [[a)] an RFID tag responsive to a reader signal is within a tag read range;

[[e)]] f) reading an initial response of ~~a card;~~ the RFID tag;

[[f)]] g) if the RFID tag is not within the tag read range, repeating steps-e d) and [[d);] e);

[[g)]] h) if the RFID tag ~~exist~~ exists within the tag read range, determining whether the initial response of the ~~card~~ tag read ~~leads to~~ results in data collision;

[[h)]] i) if the initial response ~~leads to~~ results in data collision, repeating steps-e d) through [f);] g);

[[i)]] j) if the initial response does not ~~lead to~~ result in data collision, reading the data stored at a memory of the RFID tag ~~with~~ using a predetermined protocol;

[[j)]] k) verifying whether a format of the read data is valid;

[[k)]] l) if the verified format is not valid, repeating steps-i j) and [j);] k); and

[[l)]] m) if the verified format is valid, generating a second gap signal to ~~notify~~ indicate that the data transfer is complete and ~~then~~ repeating steps-d e) through [[j);] k);

Claim 5 (canceled).

Claim 6 (currently amended): The method ~~as recited in~~ of claim 4, wherein a period of the second gap signal is shorter than ~~that~~ a period of the first gap signal.

Claim 7 (new): The RFID reader of claim 1, wherein the ~~read~~ tag data stream is outputted from an RFID tag.

Serial No.: 09/945,482  
Group Art Unit: 2635

Claim 8 (new): The RFID reader of claim 7, wherein the RFID tag comprises:  
an antenna matched to a resonance frequency of the RFID reader; and  
an integrated circuit electrically coupled to the antenna.

Claim 9 (new): The RFID reader of claim 8, wherein the integrated circuit comprises:  
a memory for storing data; and  
a timer for establishing the non-transfer period of the RFID reader.

Q13

Claim 10 (new): The method of claim 4, wherein the tag comprises:  
an antenna matched to a resonance frequency of the RFID reader; and  
an integrated circuit electrically coupled to the antenna.

Claim 11 (new): The method of claim 10, wherein the integrated circuit comprises:  
a memory for storing data; and  
a timer for establishing a non-transfer period of the RFID tag.